

PATENT  
Customer No. 22,852  
Attorney Docket No. 04329.2163-01

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of: )  
Fumihiko SANO et al. ) Parent Group Art Unit: 2131  
Application No.: To be Assigned ) Parent Examiner: BAUM, Ronald  
Rule 53(b) Divisional Application of )  
Serial No. 09/388,388 )  
filed September 1, 1999 )  
Filed: Concurrently Herewith )  
For: ENCRYPTION/DECRYPTION )  
UNIT AND STORAGE MEDIUM )

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. § 1.97(b)**

Pursuant to 37 C.F.R. §§ 1.56 and 1.97(b), Applicants bring to the attention of the Examiner the documents listed on the attached PTO 1449 Form. This Information Disclosure Statement is being concurrently filed with the above-referenced divisional application.

Copies of the listed documents were previously submitted or cited by the Examiner in a prior application, Serial No. 09/388,388 filed September 1, 1999, upon which Applicants rely for the benefits provided in 35 U.S.C. § 120. Applicants respectfully request that the Examiner consider the listed documents and indicate that they were considered by making appropriate notations on the attached PTO 1449 Form.

This submission does not represent that a search has been made or that no better art exists and does not constitute an admission that each or all of the listed documents are material or constitute "prior art." If the Examiner applies any of the documents as prior art against any claims in the application and Applicants determine that the cited documents do not constitute "prior art" under United States law, Applicants reserve the right to present to the office the relevant facts and law regarding the appropriate status of such documents.

Applicants further reserve the right to take appropriate action to establish the patentability of the disclosed invention over the listed documents, should one or more of the documents be applied against the claims of the present application.

If there is any fee due in connection with the filing of this Statement, please charge the fee to our Deposit Account No. 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,  
GARRETT & DUNNER, L.L.P.

Dated: March 2, 2004

By: Anthony J. Lubli Reg. No. 53,232  
for Richard V. Burgujian  
Reg. No. 31,744

## INFORMATION DISCLOSURE CITATION

Atty. Docket No.	04329.2163-01	Appln. No.	To be Assigned
Applicant	Fumihiko SANO et al.		
Filing Date	Concurrently Herewith	Parent Group:	2131

## U.S. PATENT DOCUMENTS

Examiner Initial*	Document Number	Issue Date	Name	Class	Sub Class	Filing Date If Appropriate
	3,962,538	06/08/76	Ehrsam et al.			
	5,231,662	07/1993	van Rumpt et al.			
	4,157,454	06/1979	Becker			
	5,778,074	07/1998	Garcken et al.			
	6,570,989	05/2003	Ohmori et al.			
	5,623,549	04/1997	Ritter			
	5,768,390	06/1998	Coppersmith et al.			
	5,606,616	02/1997	Sprung et al.			
	5,454,039	09/1995	Coppersmith et al.			
	5,623,548	04/1997	Akiyama et al.			

## FOREIGN PATENT DOCUMENTS

	Document Number	Publication Date	Country	Class	Sub Class	Translation Yes or No
	10-116029	05/06/1998	Japan			Abstract
	51-108701	9/27/1976	Japan			Partial Translation

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	E. Biham et al., "How to strengthen DES using existing hardware," Advances in Cryptology - ASIACRYPT'94, 4 <sup>th</sup> International Conference on the theory and applications of cryptology.
	Proceedings, Advances in Cryptology - ASIACRYPT-94, 4 <sup>th</sup> International Conference on the theory and applications of cryptology, Wollongo, pp. 398-412, XP000527605, 1995, Berlin, Germany, Springer-Verlag.
	M. H. Dawson et al., "An expanded set of design criteria for substitution boxes and their use in strengthening DES-like cryptosystems," IEEE Pacific Rim Conference on Communications, Computers and Signal Processing (Cat. No. 91CH2954-6), Victoria, BC, Canada, 9-10 May 1991, pp. 191-195, vol. 1 XP000280289, 1999.
	American National Standard, "X.9.52 - 1998, Triple Data Encryption Algorithm Modes Of Operation, "American Bankers Association," Pages 1-89, 1998.
	Fumihiko Sano and Kouichi Sakurai, "DES Compatible 128-bits Key Block Cipher DES-SS."

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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)	
	"Proceedings of the 19 <sup>th</sup> Symposium on Information Theory and Its Application," December 3-6, 1996, Vol. 2, IEEE Information Theory Society, Tokyo Chapter.
	E. Biham and A. Shamir, "Differential Cryptanalysis of DES-Like Cryptosystems," Journal of Cryptology, Vol. 4, Number 1, 1991.
	Mitsuru Matsui, "Linear Cryptanalysis of DES Cipher (I)," Encryption and Information Security Symposium, 1993.
	Bruce Schneier, Applied Cryptography, Second Edition, 1996, John Wiley & Sons, Inc.

Examiner	Date Considered
<p>*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p>	
Form PTO 1449	Patent and Trademark Office - U.S. Department of Commerce